Item 834-F-5
NS 1.20/2:SE79-26

NATIONAL
SCIENCE
FOUNDATION

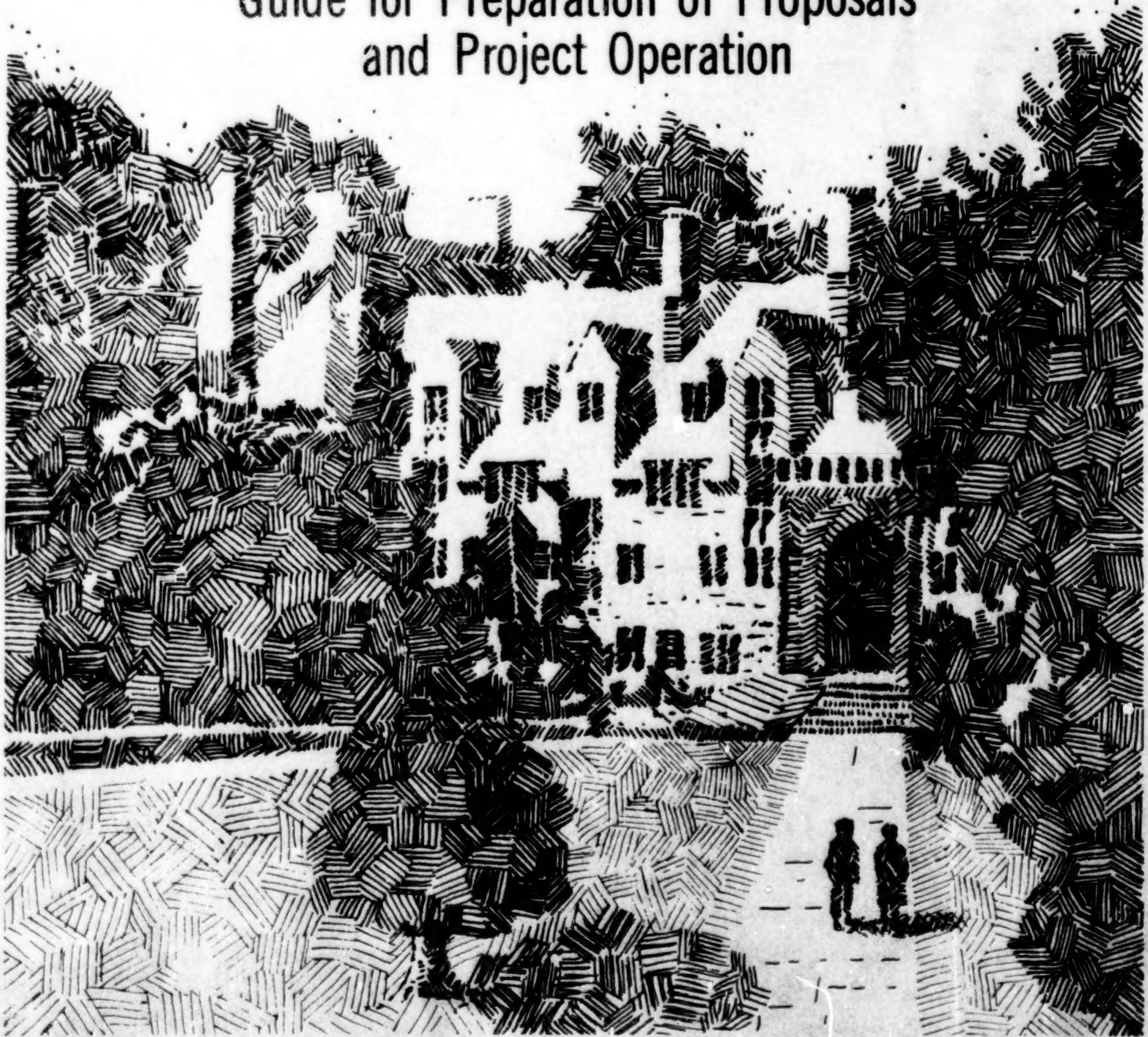
COMPLETED

ORIGINAL

DIVISION OF SCIENTIFIC PERSONNEL IMPROVEMENT

Women in Science
Science Career Workshops

Guide for Preparation of Proposals and Project Operation



28

CLOSING DATE: December 1, 1978

AWARDS ANNOUNCED: Mid May 1979

Important Changes in Women in Science Career Workshops for FY 1979

1. The types of Workshops have been reduced in number from four to three, and the target groups for each type have been altered to some extent.
2. The maximum level of support has been raised slightly to promote the development of continuing activities.
3. Institutions that received a grant for the first time in fiscal year 1978 may *not* submit a proposal this year at any level.
4. Only *one* proposal may be submitted by an institution, even though it may be eligible to submit at more than one level.

A

CONTENTS

A. General Program Description 1

B. Description of Science Career Workshops........................... 2

- Location and Duration of Workshops 2
- Staffing 2
- Fields of Science 2
- Types of Workshops 2
- Participants 3
- Evaluation 3
- Continuing Activity 3
- Eligible Institutions 4
- Limits on Number of Proposals 4
- Funding 4
- Duration of Project 4

C. Preparation of Proposals.. 5

- Cover Page 5
- Table of Contents 5
- Abstract 5
- Description of Institution 5
- Narrative 5
- Budget 5
- Fiscal Discussion 6
- Vitae 6
- Appendices 6

D Submission of Proposals.. 6

- Statement of Intent to Submit 6
- Procedure for Submission of Proposals 6
- Acknowledgment of Receipt of Package 6
- Closing and Award Dates 7

E. Other Considerations in Submitting Proposals 7

- Assurance of Compliance with Civil Rights Act 7
- Confidential Aspects of Proposals and Awards 7
- Grantee Organization and Management Data 7

F. Proposal Review and Award Decisions 8

G. Project and Award Management 8

- Grant Administration 8
  - Publicity 8

  Duration of Grant 9
  Responsibilities of Project Director 9
  Change of Project Director 9
  Budget Flexibility 9
  Change in Number of Participants 9
  Safety Precautions 9
  Project Time Extensions 9
  Project Monitoring and Evaluation 10
Project Reporting Requirements 10
  Interim Reports 10
  Final Reports 10
Acknowledgment and Disclaimer 11
Appendix Material 12
  Selected Bibliography of Evaluation Literature 12
  Outline of Kinds of Data Useful for Evaluation and Reporting Requirements for Freshman-Sophomore Science Career Workshop 13
  Institutions that Received a Workshop Grant in Fiscal Year 1978 for the First Time 15
  Sample Cover Page 16
  Sample Budget Form 17
  Individual Reviewer Form 19
  Final Project Report (NSF Form 98A) 22

A. GENERAL PROGRAM DESCRIPTION

The Women in Science Program was established in fiscal year 1976. Its objective is to develop and test methods to attract women to and retain them in scientific careers. The projects supported under the Women in Science Program are experimental, in that they are attempts to discover educational approaches and techniques that will be useful to the Nation in increasing the percentage of women who are scientists and the percentage of scientists who are women. Furthermore, the Program itself is experimental in that the pattern of support varies from year to year. The variations are based on evaluation of past projects and studies to determine what other kinds of approaches might be successful.

In 1976 the staff of the Science Education Directorate of the National Science Foundation worked with the Committee on Minorities and Women in Science of the National Science Board, which is the policy-making body of the Foundation, to develop a program plan. According to the plan developed and approved by the full board, the Women in Science Program was to direct its efforts to three target audiences: college and university students, women with degrees in science who are not in science, and high school students.

In fiscal years 1976 through 1978 a total of 71 grants were made for Science Career Workshops in 31 states and the District of Columbia. In the first two years of the Program, participants in the Workshops were limited to women students in colleges and universities; in 1978, three of the Workshops were directed to women with at least a bachelor's degree in science who were neither in graduate school nor employed in scientific jobs commensurate with their training.

A total of 21 grants were made in 1976 and 1977 for Science Career Facilitation Projects. Participants in Facilitation Projects are women with degrees in science who need a short, specially designed educational experience in order to enter or reenter their original or related fields of science. In 1978, continuation grants were made to six of the eleven Facilitation Projects funded in 1976.

Efforts directed to high school students began in 1977 with the award of a contract to Research Triangle Institute (RTI) of North Carolina to plan a Visiting Women Scientists Program. On the basis of the plan developed a pilot program was carried out by RTI in academic year 1977-78. A report on the pilot program is being prepared and will receive wide circulation.

The pattern of support in fiscal year 1979 will take the following form:

1. Proposals will again be accepted for several types of Science Career Workshops. However, the types of Workshops have been reduced in number from four to three, and the target groups for each type have been altered to some extent. In addition, the level of support has been raised slightly to promote the development of continuing activities.

2. As in 1978, no new awards will be made for Science Career Facilitation Projects (SCFP). An evaluation of this component is now underway to determine what direction it should take in the future. The Foundation expects, however, to make renewal awards to some of the institutions that received SCFP grants in fiscal year 1977, in order to take advantage of the knowledge and experience gained by these institutions in carrying out their original projects.

3. Plans for the future of the Visiting Women Scientists Program (VWSP) are being developed. Information about the VWSP will appear in a future issue of the *NSF Bulletin*.

In summary then—this document invites the submission of proposals for one type of activity, i.e. Science Career Workshops, which may be carried out at one of three levels. The amount of funding available for support of the Workshops will depend on the costs of other components of the Women in Science Program. In fiscal year 1978, 94 proposals were submitted for Science Career Workshops, and the Foundation was able to support 25 of these at a total cost of $244,260.

B. DESCRIPTION OF SCIENCE CAREER WORKSHOPS

The specific objective of this activity is to provide factual information and practical advice regarding careers in science to women undergraduate students or to women who have at least a bachelor's degree in science and need guidance regarding further education or how to obtain scientific jobs that will make full use of their potential.

LOCATION AND DURATION OF WORKSHOPS

These Workshops are to be held on college and university campuses if possible; rented facilities off-campus may be used if sufficient space is not available on campus. They are to be 1 or 2 days in length. Two-day Workshops are expected in most cases to be held on consecutive days. However, consideration will be given to Workshops on nonconsecutive days, if sufficient justification is given for this mechanism. Those planning to hold Workshops on a weekend should consider the fact that some participants may wish to attend religious services.

STAFFING

The Workshops may be planned and conducted by science departments or other appropriate units of the grantee institution. In conducting these Workshops, a grantee institution will be expected to bring in scientists from other educational institutions, industry, and government, as well as manpower and employment specialists, as may be necessary to supplement its own capability.

FIELDS OF SCIENCE

The Workshops must be *multidisciplinary* and cover the physical, biological, medical (but not clinical), environmental, social, and behavioral sciences, as well as mathematics and engineering, and interdisciplinary fields which combine two or more sciences (e.g., meteorology, geochemistry, and bioengineering). They are not to cover medical technology, physical therapy, and similar science-related fields not supported by NSF. Candid information should be provided about job opportunities in various fields of science and various sectors of the economy so that students can consider this factor in making decisions.

TYPES OF WORKSHOPS

The Workshops may be of three types corresponding to three periods of critical decision-making:

1. Workshops for college freshmen and sophomores and high school seniors expected to attend college. The majority of participants are expected to be college students and the presentations should be made at their level of sophistication. A limited number of high school seniors may be selected as participants and high school teachers and counselors may attend as observers. Information should be presented that will enable students to make informed decisions regarding careers in science. The Workshops should cover various career options and provide practical advice concerning such topics as appropriate courses to take and other experiences to obtain during vacation periods. Participants should not be limited to those who have shown a strong interest in science, but preference should be given to those judged to have the potential to become scientists. All participants should be given some exposure to all fields regardless of current preferences. It is, of course, impossible in 1 or 2 days to involve persons in all fields supported by NSF. But all major divisions of science should be represented, and the literature made available to participants should give a comprehensive picture of the world of science.
2. Workshops for sophomores, juniors and seniors majoring in science. Information should be provided about the options for employment available to those who terminate their formal education at the bachelor's level or obtain graduate degrees, and how these options vary from field to field. Practical advice should be given about

selecting a graduate school, gaining admission, applying for fellowship and other types of support, and what to expect once accepted as graduate students. While much of this information and advice can be given to the group as a whole, it may be appropriate to divide the participants at some point into subsections according to their major fields.

3. Workshops for women who have at least a bachelor's degree in science, hereafter referred to as post-baccalaureate Workshops. Participants may include any combination of graduate and postdoctoral students, untenured faculty, women wishing to change from one science field to another, or women who are presently neither in graduate school nor employed in scientific jobs that make use of their full potential. The kinds of information to be provided will, of course, depend on the type and mix of participants. Graduate students, for example, should be told about the options for employment available to those who terminate their formal education at the master's level or obtain doctoral degrees. For those intending to obtain the Ph.D. degree, information should be given regarding the advantages and disadvantages of obtaining postdoctoral training and how to obtain such training if desired. Those seeking to reenter science or to change careers should be informed about career opportunities in various fields, both nationally and in their area of residence. Practical advice should be given about the need for updating scientific knowledge and how and where such updating might be obtained. These Workshops should also deal with problems faced by women who choose to combine careers in science with homemaking, and with techniques for locating jobs, preparing resumes, and otherwise obtaining employment in science. In the case of post-baccalaureate Workshops for a variety of participants, it will probably be appropriate to divide the participants at some points into subsections according to their fields and backgrounds.

PARTICIPANTS

In the case of pre-baccalaureate Workshops, participants should include students at colleges and universities within approximately 100 miles of the grantee institution, as well as those enrolled in the grantee institution. Directors of Workshops at the freshman-sophomore level should make special efforts to attract students from junior and community colleges. There are no geographical restrictions for the post-baccalaureate Workshops; the grantee institution may specify the radius from which participants will be drawn. In all cases, consideration should be given to the need to increase the representation in science of women from disadvantaged ethnic minority groups and women who are physically handicapped. The numbers of participants in the Workshops supported in fiscal year 1978 are expected to range from 100 to 350 and to average 220.

EVALUATION

A clear plan must be described for evaluating the Workshop. For guidance on how to carry out an evaluation, reference should be made to the bibliography on page 12. In addition to the self-evaluation of the project, the Foundation will, as part of its own program development activities, monitor selected Workshops. On pages 13 and 14 an outline is given of the kinds of data that would be useful for the evaluation of a freshman-sophomore level Workshop. A similar outline will be sent to grantees conducting Workshops at the other levels.

CONTINUING ACTIVITY

The proposal must present a plan for the development of a continuing activity that is expected to result from conducting the Workshop. Funds will be provided under the grant to initiate this activity, which might take one of several forms, such as the establishment or improvement of an ongoing science career counseling program or the formation of a cooperative arrangement with other educational institutions to use local resources to conduct annual science career workshops. The activity to be developed need not be confined to the type of participants served by the Workshop. For example, a Workshop for freshmen and sophomores might result in a science career counseling program for students at all educational levels as well as alumnae. Following the presentation of the plan, there should be a statement of commitment from the institution to continue the activity initiated under the grant. If desired, this could take the form of a letter or memorandum to the

Project Director from an appropriate administrative official of the institution.

ELIGIBLE INSTITUTIONS

Proposals for Workshops for freshmen and sophomores may be submitted by institutions of higher education with at least a 2-year science program; for Workshops for sophomores, juniors and seniors by 4-year colleges or universities offering science majors; and for post-baccalaureate Workshops by universities offering graduate degrees in fields of science supported by the National Science Foundation.

Since it is believed that institutions should have the experience of running one Workshop before planning another, institutions that received a Workshop grant for the first time in fiscal year 1978 (see page 15 for a list of these institutions) may *not* submit a proposal this year at any level.

LIMITS ON NUMBER OF PROPOSALS

Only *one* proposal may be submitted by an institution, even though it may be eligible to submit at more than one level. This is a change from the 1977 and 1978 rules. The one proposal submitted may be at the same level for which support was previously provided, or it may be at a different level. For example, a 4-year college that received a grant in 1976 or 1977 for a freshman-sophomore level Workshop may submit one proposal, either at that level or at the sophomore-junior-senior-level. It is expected that the number of renewal grants at the same level will be limited to no more than one-third of the total number of awards made.

FUNDING

NSF support will be limited to a maximum of $12,000 for the Workshop and the initiation of a continuing activity. At least 15 percent of the total amount awarded is to be used for the latter. Additional funds must be sought from other sources if the cost of the project will exceed the $12,000 grant limit.

NSF funds may be requested for: (1) travel and subsistence for participants who are not students at the grantee institution, (2) salaries and wages for the Project Director and staff for planning, conducting, and evaluating the Workshop, and for initiating the continuing activity—if these tasks are clearly outside their regular duties, (3) secretarial and clerical help, (4) travel, subsistence, and honoraria for outside experts, (5) communication costs and publicity, (6) other costs such as purchase of career booklets, and (7) indirect costs.

Because of the short-term nature of Science Career Workshops, grantees may wish to use breaks or meal times as opportunities for informal interaction among participants, faculty, and visiting experts. Modest subsistence funds may therefore be requested for breaks and for meal costs for local as well as commuting participants.

The amount to be paid for honoraria for guest lecturers or panelists must not exceed $183 per day. Grant funds may not be used to pay honoraria or consultant fees to employees of the grantee institution. Employees of the Federal Government may be used as guest lecturers, panelists or consultants. However, they may receive compensation and/or expenses from grant funds only if they obtain prior approval from their agencies to participate, and if services to the project are performed outside their regular working hours or while they are on leave status from official duties. Under no circumstances may employees of the National Science Foundation receive compensation and/or expenses from grant funds or from funds obtained by the grantee from other sources. If NSF employees attend Workshops, their expenses must be covered by internal NSF management funds.

DURATION OF PROJECT

The Workshop is to be held during academic year 1979-80, unless unusual circumstances make necessary a postponement to 1980-81. The initiation of the continuing activity is to be completed within 6 months after the date of the Workshop.

C. PREPARATION OF PROPOSALS

The proposal should contain eight sections, assembled in the order shown. Appendices are optional.

1. **Cover Page.** The sample provided on page 16 should be followed as closely as possible.

2. **Table of Contents.**

3. **Abstract.** This should be a condensed narrative on a separate page, describing the project, not more than 250 words in length, which can be used in reports and summaries.

4. **Description of Institution.** On a separate page a brief description should be given of the institution submitting the proposal. This description—which should not exceed one page—should include the following kinds of information for academic year 1977-78 perferably in tabular form.

a. Total enrollment
b. Number of female students enrolled (of these, please indicate—if possible—the number who are members of ethnic minority groups or who are physically handicapped)
c. Highest degree awarded in the sciences
d. Number of juniors and seniors who were majoring in a science (2-year colleges should report the number of second-year students who were specializing in a science)
e. Number of these majors who were female (of these, please indicate—if possible—the number who are members of ethnic minority groups or who are physically handicapped)
f. Total faculty in science departments
g. Number of science faculty who were female (of these, please indicate—if possible—the number who are members of ethnic minority groups or who are physically handicapped)
h. Other information judged to be relevant to the proposal.

5. **Narrative.** This should be a detailed statement of the proposed Workshop constructed with the same care as a paper to be submitted for publication. The narrative portion should not exceed 15 double-spaced pages in length. Reviewers will not be responsible for studying super-numerary pages.

The narrative should include a discussion of the following points in the order listed:

a. Description of the Workshop planned, how it will be carried out, and methods to be used to publicize the Workshop to prospective participants.
b. Criteria for the selection of participants, method of selection, and number of participants expected. In freshman-sophomore Workshops, since preference is to be given to those judged to have the potential to become scientists, selection on a "first-come, first-served" basis is not appropriate.
c. Description of the plan for evaluating the Workshop, including the types of data to be collected and the techniques to be used for measuring the impact of the Workshop on the participants.
d. Description of the plan for the development of the expected continuing activity. (Those who have previously received grants from NSF for Science Career Workshops should also describe any activities resulting from these grants and their current status.)
e. Faculty and administrators to be involved and a description of the duties of each.
f. Names and qualifications of outside experts to be involved, if they have been identified. If names cannot be given, then there should be a description of the kinds of outside expertise to be sought.
g. Experience of the institution in carrying out similar activities, e.g., career workshops, other kinds of workshops, other kinds of career guidance activities, special projects and programs for women students.
h. Physical resources for carrying out the Workshop.
i. Schedule for accomplishing the objectives of the project, including the tentative date(s) on which the Workshop will be held.

6. **Budget.** The Foundation requires a summary budget prepared in accordance with Form 1030 (see pages 17 and 18). Please note that lines A through Q of this form are to indicate that portion of the project costs to be paid from NSF funds. If non-NSF funds are to be used, the remainder of

the project budget should be itemized on an attached separate page, using the categories and general format of Form 1030.

7. **Fiscal Discussion.** A brief section should follow the budget pages and justify the level of support requested, category by category.

8. **Vitae.** A curriculum vitae should be presented for each person having a significant role in the project, including outside experts, whether actually receiving NSF support or not. The Foundation considers the academic, scientific, and administrative competence of the project director to be of particular significance to the likelihood of project success. It is expected that the project director will be an experienced science educator or administrator and that she or he will be directly involved in project activities to a significant degree. Two co-directors may be used, but one of these must be designated as the person who will assume the responsiblity for carrying out the project as proposed. The name of the person so designated is the one that should be given on the cover page. If two co-directors are named, the proposal should make clear how their skills are complementary and what their respective duties will be.

9. **Appendices.** Material that is supplementary to the text of the proposal may be included in appendices. Institutional catalogs, departmental curricula, or other general material should NOT be included. Each appendix should be tabbed or printed on colored paper or prepared in some manner to make it easily distinguishable from the body of the proposal. Voluminous appendices cannot be read by reviewers in the time available for proposal evaluation.

D. SUBMISSION OF PROPOSALS

STATEMENT OF INTENT TO SUBMIT

Informal or preliminary proposals will not be considered. To assist the Foundation in preparing for its review of proposals, institutions planning to submit proposals are requested to complete and return an Intent-to-Submit Card (found on the inside back cover of this announcement) at least 10 days prior to the closing date of December 1. This information is important to the NSF staff in preparing for an adequate review. However, returning the card does not commit either the individual or the institution to submitting a proposal, and failure to return the card does not disqualify the institution from submitting a proposal.

PROCEDURE FOR SUBMISSION OF PROPOSALS

1. Fifteen (15) copies of the complete proposal are required.
2. Five (5) extra copies of the Cover Page and Abstract are required.
3. Copy should be double-spaced on 8"x10½" or 8½"x11" paper.
4. Pages are to be numbered at bottom center.
5. The Cover Page is the letter of transmittal. Institutional letters of endorsement or transmittal, supporting letters, institutional forms, etc., if included, must be appended to the proposal. When placed over the Cover Page they delay processing and increase chances for error.
6. Proposals are to be assembled in the order shown on pages 5 and 6 and should be stapled in the upper left-hand corner only.
7. Transmit all 15 copies and extra copies of the Cover Page and Abstract in a single package. Secure packaging is mandatory. The Foundation cannot be responsible for the processing of proposals damaged in transit.
8. Mail to:

   Central Processing Section for
   Women in Science Program
   National Science Foundation
   Washington, D.C. 20550

   or carry by hand to Room 223, 1800 G Street, N.W., Washington, D.C.

ACKNOWLEDGMENT OF RECEIPT OF PACKAGE

To facilitate acknowledgment of the arrival of the package at the Foundation, the proposer should cut out the two postcards on the back cover of this Guide and fill them in to identify the proposal, with one postcard self-addressed and the other addressed to the institutional official authorized to sign the Cover Page. When the package arrives, the date of receipt and an assigned proposal number will be stamped on both cards for future reference by the proposer. If an acknowledgment card with the proposal number endorsed upon it is not received by 2 weeks after the submission deadline, the proposer should promptly contact the Women in Science Program to request a tracer. No such request should be made prior to that date.

The processing of proposals will be hastened by proposers' refraining from writing or calling the staff with any but the most essential inquiries.

NOTE: The Acknowledgment Cards should not be confused with the Intent-to-Submit Card. The latter is to be submitted well *before* the submission of the proposal, the former *at the same time* the proposal is submitted.

CLOSING AND AWARD DATES

Proposals must be received in the Foundation by close of business December 1, 1978 to insure inclusion in the competitive review process established for this program. Awards will be announced about Mid-May, 1979. No information on the status of any pending proposal will be provided prior to public announcement of awards.

E. OTHER CONSIDERATIONS IN SUBMITTING PROPOSALS

ASSURANCE OF COMPLIANCE WITH CIVIL RIGHTS ACT

If the applicant university, college, or other organization has not filed an Assurance of Compliance with Title VI of the Civil Rights Act of 1964, as required by NSF regulations, pertinent forms and a copy of the regulations may be obtained by writing to the Division of Grants and Contracts, National Science Foundation, Washington, D.C. 20550. The required Assurance Form, when completed by the institution, should be submitted to the Division of Grants and Contracts. Once an Assurance of Compliance has been submitted by the applicant organization, it covers all proposals subsequently submitted by any department or other unit of that organization. If there is any question about whether or not an Assurance of Compliance has been filed, the institution's business office should be consulted.

CONFIDENTIAL ASPECTS OF PROPOSALS AND AWARDS

When a proposal results in a grant, it becomes a part of NSF's record of the transaction, available to the public upon specific request. Information that NSF and the grantee mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law; therefore, any information that the applicant wishes to have NSF consider as privileged should be clearly marked as such and sent in a separate statement, two copies of which should accompany the proposal.

A proposal that does not result in a grant may be retained by NSF. Such a proposal will be released only: (1) with the consent of the proposer or (2) to the extent required by law. A proposal may be withdrawn at any time prior to final action thereon by NSF.

GRANTEE ORGANIZATION AND MANAGEMENT DATA

If your organization has not received an NSF grant within the past 2 years, please fill out the Organization and Management Information card on the back of the brochure and attach it to the original copy of the proposal.

F. PROPOSAL REVIEW AND AWARD DECISIONS

Proposals will be evaluated by members of the NSF professional staff assisted by review panels of scientists and educators drawn from two- and four-year colleges, universities, research organizations, and professional scientific societies. Reviewers will be asked to make their judgments based on the criteria listed on the "Individual Reviewer Form" on pages 00 and 00. Proposers are therefore advised to make sure that their proposals are responsive to these criteria.

Final decisions on proposals to be supported will be made by NSF. The primary consideration, and in most cases the only consideration, in the decision whether or not to fund a project, is merit, as judged by the review panels. Normally, among comparable proposals judged to be of substantial but less than highest merit, other factors may also be considered in a relatively small number of cases. These include criteria for distribution of funds by geography, types of institutions, or educational levels at which the Workshops will be offered, i.e., freshman-sophomore, sophomore-junior-senior, etc.

Successful proposers will be notified by means of a copy of the grant letter sent to the appropriate official of the grantee institution by the NSF Grants Officer. All unsuccessful proposers will receive a letter of declination from the Directorate for Science Education.

After final decisions have been announced, the Foundation, upon request, will inform applicants of the reasons for its decision on the proposal. Verbatim copies of reviews, not including the identity of the reviewer, also will be made available to applicants upon request.

G. PROJECT AND AWARD MANAGEMENT

GRANT ADMINISTRATION

Grants will be administered in accordance with the terms and conditions of the award instrument.

An NSF grant is normally made to an organization, known as the grantee, rather than to the individual principal investigator or project director who proposed to conduct the project. Notification of an award is made by letter signed by the NSF grants officer. The grant establishes a relationship between NSF and the grantee in which:

a. NSF agrees to provide financial support for the project to be performed under the provisions of the grant instrument.
b. The grantee agrees to the performance of the project, to the prudent management of the funds provided by the grant, and to the provisions of the grant instrument.

The grantee is free to accept or reject the grant. Normally, the action to obtain Federal funds constitutes acceptance of a grant once it is made. However, in some cases, NSF may require written acceptance.

All written inquiries of a programmatic or technical nature should be directed to the Women in Science Program, Division of Scientific Personnel Improvement, National Science Foundation, Washington, D.C. 20550. Inquiries about other matters should be directed to the Foundation's Division of Grants and Contracts at the same address. Personal visits to the program staff may be made to Room W-406, 5225 Wisconsin Avenue, N.W., Washington, D.C. or telephone calls directed to (202) 282-7150. (Correspondence should not be sent to the Wisconsin Avenue address.)

Publicity. Following receipt of the NSF award, a project director may wish to prepare a local news release to inform the public of the forthcoming Workshop. Project directors should cooperate with news media as deemed appropriate. In publicizing a Workshop, the words "sponsor" or "sponsorship" should not be used when referring to NSF support. Instead, it should be stated that the Workshop is supported (or supported in part) by a grant from the National Science Foundation.

Duration of Grant. The grant period extends from the effective date of the award through the expiration date and is that span of time during which the objectives of the project are to be achieved and the grant funds are available for appropriate obligation. This period intentionally is longer than the duration of the project in order to allow time for preparation of reports after the project is concluded. The grant becomes effective on the date specified in the grant letter and expires on the date given in that letter. It is required that all commitments of grant funds be made during the grant period.

Responsibilities of the Project Director. Operating with the policies and procedures of the parent institution and these guidelines, the project director is responsible for arranging and directing the instructional offerings of the project, the selection and supervision of staff and participants, authorizing expenditures of project funds, arranging schedules and facilities for instruction, meals and housing, maintaining liaison with NSF program staff, and the preparation and submission of required reports.

All correspondence regarding the operation of the project and any requests for approval of proposed modification of project plans must be prepared and signed by the project director. Requests for approval of major changes must be endorsed by the Authorized Institutional Representative.

The Foundation will address all correspondence pertaining to this grant to the project director except that fiscal accounting forms and inquiries pertaining to business matters are sent to the business officer of the grantee institution.

Change of Project Director. If a change of director becomes necessary, the continuation of the grant will be subject to review by the National Science Foundation, because assessment of the merit of a project is often based in part upon the professional stature and extent of personal involvement of the designated project director. In the event a project director relinquishes active direction of the project and is not replaced, NSF support of the project will terminate. No change in project director shall become effective without written confirmation from the Foundation in the form of an amendment to the grant.

In order to implement this review, the following steps should be taken:

1. Under normal circumstances, the retiring project director should nominate her or his successor, who must be approved by the grantee institution.
2. The program manager must be notified by letter of this nomination and provided the proposed project director's name together with a resume of her or his training and qualifications. This letter should be signed by the retiring project director, the recommended successor, and the appropriate administrative official of the institution.

Budget Flexibility. Although the grant budget provides an itemization of operating costs, the project director is permitted to make such transfers among items *within the operating cost category* as she or he deems necessary to effective project operation, to the extent that they are consistent with NSF policy as stated elsewhere in this Guide or in the grant instrument, but such changes should be *reported immediately* to the NSF program manager.

Change in Number of Participants. Funds allocated for participant support may not be used to cover operating costs without prior approval of NSF. If the project director desires, operating funds may be used to support additional participants, but any major change in the number of participants must have prior NSF approval, which should be requested through the program manager.

Safety Precautions. Project directors are cautioned to adopt, instruct participants in, and enforce all safety precautions appropriate to the nature of the project. NSF assumes no liability with respect to accidents, bodily injury, illness, or breach of contract or other damages or loss, or with respect to any claims arising out of any activities undertaken with the financial support of an NSF grant, whether with respect to persons, property of the grantee, or third parties.

Project Time Extensions. It is expected that projects will be completed within the time period specified in the award instrument. Therefore requests for no-cost time extensions should be submitted only under the most unusual of circumstances.

Requests for no-cost extensions must be received at least 45 days prior to the expiration date of the grant, signed by both the Project Director and the Authorized Organizational Representative. The letter must fully justify the need for the extension, give a summary of progress to date, include an estimate of the unobligated funds remaining, and describe a plan for their use. This plan must coincide with the original or amended objectives of the project. The fact that funds remain at the expiration of an award is not justification for an extension.

Project Monitoring and Evaluation. The NSF uses a variety of techniques to monitor and evaluate project progress and outcomes. Site visits may be made by NSF staff or consultants. Proposers should be aware that the Foundation may, as a part of its own program evaluation activities, carry out in-depth evaluations of selected awarded projects through independent third parties. Thus, proposers should be prepared to cooperate with evaluators eventually retained by the Foundation to analyze both the conduct and the impact of any supported project.

PROJECT REPORTING REQUIREMENTS

Interim Reports. The program staff should be informed of the final date(s) of the Workshop and furnished with a copy of the final agenda as soon as possible. In addition, the program staff would appreciate receiving, at any time, materials related to the grant, such as news releases, publicity, or articles. An interim report should be submitted within 30 days after the Workshop. This report should give attendance figures and briefly describe (in no more than two pages) the plans for completing the project.

Final Reports. The Foundation's simplified grant reporting procedures are set forth as follows in Important Notice No. 73 (May 8, 1978):

1. Two copies of the Final Project Report (NSF 98A, revised May, 1978) are to be submitted by the project director within 90 days after expiration of the award to:

   National Science Foundation
   Division of Grants and Contracts
   Post-Award Projects Branch
   Washington, D.C. 20550

   The purpose of a final report is twofold. It provides for the record a factual account of the project, and it also provides an opportunity for an assessment of the effectiveness of the activity and of the NSF program through which the project was supported.

2. There is no standard form for the technical description of the project and results (Form 98A, III), but a narrative account is preferred. It should repeat, if necessary, pertinent material from earlier director's reports. It should be typed on standard size (8"x10½" or 8½"x11") paper, unbound, but stapled in the upper left hand corner.

   Two copies of the technical description should be submitted directly to the program manager within 90 days after the expiration of the award.

   In preparing the technical description, the kinds of data suggested in the outline on pages 13 and 14 may be useful. The following points should be covered:

   Date(s) of Workshop
   Termination Date of Project
   Description of What Was Accomplished
   Information on Student Participants
   Information on Applicants not Selected (if obtained)
   Information on Participating Staff, Consultants, and Outside Experts
   Results of Evaluation
   Other Pertinent Information
   Recommendations for the Science Career Workshop Component of the Women in Science Program

   The Description of What Was Accomplished should cover not only the actual Workshop, but such matters as the publicizing of the Workshop, the selection of participants, the selection of consultants or outside experts, and the continuing activity developed or improved as part of the project. In preparing the technical description, the project director should feel free to be frank in the presentation of any aspects of the project or the WIS program, either favorable or unfavorable. A careful, unbiased critique with suggestions for future improvement, even though it has negative aspects, will be regarded positively by staff in the consideration of proposals that may be submitted in the future.

3. Final expenditure information, also required for each completed grant, is provided through the quarterly Federal Cash Transactions Report (FCTR, formerly known as the Quarterly Expenditures Report). The Foundation's computerized version of FCTR is

forwarded to the fiscal officer of each grantee institution by the Foundation's Division of Financial and Administrative Management (DFA) in the month following the close of each calendar quarter. Procedures for reporting are sent to grantees at the time an award is made. Completed Federal Cash Transactions Reports are returned to:

Division of Financial and
Administrative Management
National Science Foundation
Washington, D.C. 20550

ACKNOWLEDGMENT AND DISCLAIMER

An acknowledgment of NSF support must be made in connection with the publication of any material based on or developed under a project supported by NSF to the effect that: "This (material) was prepared with the support of National Science Foundation Grant No. 00."

Any materials, books, monographs, proceedings of symposia, or similar publications supported by an NSF grant must contain a statement, immediately following the acknowledgment, that contains an expression of the following: "Any opinions, findings, conclusions or recommendations expressed (herein) are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

Selected Bibliography of Evaluation Literature

This brief list of bibliographic citations is by no means exhaustive. We have endeavored to put together a list that can be considered a starting place. The works cited themselves contain many more references. It contains some of the "modern classics" as well as a few anthologies. The list is intended to be helpful but should not be construed as a Foundation recommendation or endorsement.

1. *Educational Evaluation & Decisionmaking.* Daniel Stufflebeam et al., Phi Delta Kappa, Inc., Bloomington, Indiana, 1971
(a large text encompassing most areas of evaluation and examining the CIPP Model, chapters include: "A New Definition of Evaluation", "Evaluation Methodology", "Evaluation Types and a Model for Evaluation", and "Process of Implementing a Strategy for Evaluation".)

2. *An Evaluation Guidebook,* W. James Popham, The Instructional Objectives Exchange, Los Angeles, 1972
(a basic "how to" book for the novice evaluator; explains many of the important terms and distinctions in the evaluator's language; body of the book is concerned with giving the evaluator a set of guidelines to follow in doing an evaluation; helpful appendix discusses a mock evaluation.)

3. *Evaluation Research,* Carol H. Weiss, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1972
(presents the rationale for evaluation of programs; discusses a variety of evaluation designs-experimental, quasi-experimental, nonexperimental, and comparative evaluation; a basic "how to" book for the novice evaluator).

4. *Educational Evaluation: Theory & Practice,* Blaine Worthen and James R. Sanders, Charles A. Jones Publishing Corp., 1973
(large text explaining many of the current theories and viewpoints in evaluation; contains papers by some of the important persons currently working in evaluation).

5. *Evaluating Educational Programs & Products,* Gary D. Borich, Editor, Educational Technology Publications, Englewood Cliffs, New Jersey, 1974
(large volume containing sixteen papers grouped around three topics; establishing perspectives-roles and context; choosing a plan-model and strategies; examining the data-methods and techniques).

6. *Evaluation in Education,*W. James Popham, Ed., McCutchan Publishing Corp., Berkeley, Calif. 1974
(consists of nine chapters, each prepared by different authors and focusing on specific areas and applications of educational evaluation; chapters of specific interest to proposal writers include the first three chapters which provide coherent and easily interpreted descriptions of two generally accepted evaluation techniques (Scriven's goal-free efforts and Stufflebeam's CIPP model); first chapter describes a checklist that might be useful for developers to use in analyzing their products and processes).

7. *Encyclopedia of Educational Evaluation,* Scarvia B. Anderson et al., Jossey-Bass Publishers, San Francisco, 1975
(combines the major concepts of evaluating education and learning programs with the related techniques; a "what is it?" rather than a "how to do it?" text).

Outline of Kinds of Data Useful For Evaluating and Reporting Requirements for Freshman-Sophomore Science Career Workshops

A. Applicant and Participant Data

1. Number of applications received
2. Number of offers made, number of declinations, number of withdrawals, number of drop-outs (a declination is a person who applied, but did not accept the offer to attend when it was made; a withdrawal is a person who applied and accepted an invitation, but before the reporting date notified the Project Director of a change in plans; a dropout is a person who reported on the scheduled date but did not stay until the termination of the Workshop.)
3. Primary reasons given for declinations and withdrawals
4. Final number of participants
5. Data regarding participants (to be provided in summary form for group. No names should be submitted to NSF, although it is expected that the grantee institution might wish to retain names and addresses of participants.)

(a) Institution where enrolled

(b) Academic level, i.e., freshman or sophomore, or high school senior

(c) Race or ethnic background (voluntary)

(d) Current major and minor (if decision has been made)

(e) Other career-oriented activities in which students have participated during the year prior to attending this Workshop

(f) Participant replies to the following kinds of questions, to be asked prior to participation in the Workshop (to save time during the Workshop these might be made part of whatever application form is developed)

(i)What is your career goal?

(ii)What plans do you have, if any, to attend graduate or professional school? Which field?

(iii) Why did you apply (or why are you applying) to attend this Workshop?

(g) Participant replies to the following kinds of questions, to be asked at the end of the Workshop *before* participants are dispersed

(i) What did you get out of the Workshop?

(ii) What did you like best about the Workshop?

(iii) What did you like least about the Workshop?

(iv) As a result of the Workshop . . .

do you think you might change your career goals? How?

do you think you might change your major or minor? If so, in what way?

do you think you might change your plans regarding attendance at graduate or professional school? If so, how?

B. Staff Data (Including Outside Experts)

1. Names of science departments and other units involved at all in planning, execution, and follow-up
2. Names, titles, training, experience, special qualifications and specific duties of each person who participated significantly in Workshop activities
3. Estimate of total person-months of professional staff (faculty, administrators, evaluators, outside experts, etc.)
4. Estimate of total person-months of secretarial and clerical staff
5. Number of invitations necessary to get the required number of outside experts
6. Reasons why invitations were not accepted

C. General Information

1. Selection of participants (method, criteria, problems, successes, etc.)
2. Components—no more than three—that were important in the achievement of the Workshop objectives
3. Components—no more than three—that were not as effective as anticipated in helping to meet Workshop objectives
4. Effects of Workshop on faculty of grantee institution, both those who participated in it and those who did not
5. Effects of Workshop on practices of the grantee institution (anticipated as well as actual)
6. Effects outside the grantee institution (other than those on the participants)
7. Total cost of Workshop including donated services, if any
8. Breakdown of total cost according to:
   (a) Amount covered by NSF grant
   (b) Amount provided by grantee institution
   (c) Amount provided by other sources—name these if possible
   (d) Amount provided through donated services—estimate if actual figure is not known: specify the nature of the services if possible

Institutions that Received a Workshop Grant in Fiscal Year 1978 For the First time

Bergen Community College, Paramus, New Jersey

California State University at Northridge

Christian Brothers College, Memphis, Tennessee

Clarke College, Dubuque, Iowa

Dutchess Community College, Poughkeepsie, New York

East Tennessee State University, Johnson City

George Peabody College, Nashville, Tennessee

Jackson State University, Jackson, Mississippi

James Madison University, Harrisonburg, Virginia

Mesabi State Junior College, Virginia, Minnesota

Morris Brown College, Atlanta, Georgia

Notre Dame College, Cleveland, Ohio

Sangamon State University, Springfield, Illinois

State University of New York at Buffalo

Texas Southern University, Houston

Tulane University, New Orleans, Louisiana

University of California at Berkeley

University of Hartford, West Hartford, Connecticut

University of Nebraska, Lincoln

University of New Mexico, Albuquerque

WOMEN IN SCIENCE

DIRECTORATE FOR SCIENCE EDUCATION
COVER PAGE

FOR CONSIDERATION BY NSF ORGANIZATIONAL UNIT
WOMEN IN SCIENCE PROGRAM

PROGRAM ANNOUNCEMENT/SOLICITATION NO.
SE 79-26

CLOSING DATE: December 1, 1978

NAME OF SUBMITTING ORGANIZATION TO WHICH AWARD SHOULD BE MADE (INCLUDE BRANCH/CAMPUS/ OTHER COMPONENTS

ADDRESS OF ORGANIZATION (INCLUDE ZIP CODE)

TITLE OF PROPOSED PROJECT
SCIENCE CAREER WORKSHOP

AMOUNT REQUESTED FROM NSF
$

PERIOD OF PROJECT OPERATION:
STARTING DATE: ENDING DATE:

DIRECTOR'S NAME AND SOCIAL SECURITY NO. (SSN)* (Dr., Prof., Mr., Ms.) Phone No.
SSN__________ Home:*( )__________
Office:( )__________

DIRECTOR'S DEPARTMENT

DIRECTOR'S ORGANIZATION IF DIFFERENT FROM SUBMITTING ORGANIZATION

Are any funds for the project proposed herein being requested in another proposal to NSF or another Federal agency?__________
If yes, indicate NSF program or agency, proposal number(s), date submitted:

PROJECT DESCRIPTORS:

A. Highest Science Degree Offered by Proposing Institution:
Associate's_____ Bachelor's_____ Master's_____ Ph.D._____
B. Type of Workshop:
Freshman-Sophomore_____ Sophomore-Junior-Senior_____ Post-Baccalaureate_____
C. Number of Participants:_____
D. Tentative Workshop Date(s):__________________

*Submission of social security and home phone numbers is voluntary and will not affect the organization's eligibility for an award. However, they are an integral part of the NSF information system and assist in processing the proposal. SSN solicited under NSF Act of 1950, as amended.

PROJECT DIRECTOR	AUTHORIZED ORGANIZATIONAL REPRESENTATIVE	OTHER ENDORSEMENT (OPTIONAL)
Name (Dr.;Prof.;Mr.;Ms.)	Name (Dr.;Prof.;Mr.;Ms.)	Name (Dr.;Prof.;Mr.;Ms.)
Signature	Signature	Signature
Title	Title	Title
Date	Date	Date

SUMMARY
PROPOSAL BUDGET

FOR NSF USE ONLY	
PROPOSAL NO.	
DURATION (MONTHS)	
PROPOSED	REVISED

ORGANIZATION AND ADDRESS

PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR

NSF USE		NSF FUNDED MAN MONTHS CAL.	ACAD.	SUMR.	FUNDS REQUESTED BY PROPOSER	FUNDS GRANTED BY NSF (IF DIFFERENT)
	A. SENIOR PERSONNEL (LIST BY NAME; SHOW NUMBERS OF PEOPLE IN BRACKETS; SALARY AMOUNTS MAY BE LISTED ON SEPARATE SCHEDULE) GPM 205.1b					
	1. P.I./P.D.				$	$
	2. CO P.I./P.D.				$	$
	3. CO P.I./P.D.				$	$
	4. CO P.I./P.D.				$	$
	5. CO P.I./P.D.				$	$
11115	6. ( ) ← SUBTOTALS A1 - A5 →				$	$
	FACULTY AND OTHER SENIOR ASSOCIATES (ATTACH EXTRA SHEET IF NECESSARY)					
	7.				$	$
	8.				$	$
	9.				$	$
	10.				$	$
	11.				$	$
11117	12. ( ) ← SUBTOTALS A7 - A11 →				$	$
	B. OTHER PERSONNEL (LIST NUMBERS IN BRACKETS)					
11141	1. ( ) POSTDOCTORAL ASSOCIATES				$	$
11149	2. ( ) OTHER PROFESSIONALS				$	$
11150	3. ( ) GRADUATE STUDENTS				$	$
11152	4. ( ) UNDERGRADUATE STUDENTS				$	$
11182	5. ( ) SECRETARIAL - CLERICAL				$	$
11183	6. ( ) TECHNICAL, SHOP, OTHER				$	$
	TOTAL SALARIES AND WAGES (A+B)				$	$
11200	C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)				$	$
	TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A+B+C)				$	$
	D. EQUIPMENT (LIST ITEMS AND DOLLAR AMOUNTS FOR EACH ITEM)					
23131	TOTAL EQUIPMENT				$	$
	E. MATERIALS AND SUPPLIES					
32630					$	$
	F. DOMESTIC TRAVEL					
42111					$	$
	G. FOREIGN TRAVEL (LIST DESTINATION AND AMOUNT FOR EACH TRIP; GPM 731)					
42112					$	$

PAGE 1 OF 2 PAGES

SUMMARY PROPOSAL BUDGET

PROPOSAL NO.

52500	H. PUBLICATION COSTS/PAGE CHARGES	$	$
62315	I. COMPUTER (ADPE) SERVICES	$	$
	J. CONSULTANT SERVICES (IDENTIFY CONSULTANTS BY NAME AND AMOUNT; GPM 516)		
		$	$
	K. PARTICIPANT SUPPORT COSTS, IF ALLOWED BY PROGRAM GUIDE (ITEMIZE) GPM 518 1. STIPENDS $ 2. TRAVEL $ 3. SUBSISTENCE $ 4. OTHER - SPECIFY $		
	5. TOTAL PARTICIPANT COSTS (K1 + K2 + K3 + K4)	$	$
	L. ALL OTHER DIRECT COSTS (List items and dollar amounts. Details of subcontracts, including work statements and budget, should be explained in full in proposal.) $ $ $ $		
65001	TOTAL OTHER DIRECT COSTS	$	$
	M. TOTAL DIRECT COSTS (A THROUGH L)	$	$
	N. INDIRECT COSTS (Specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs included in on/off campus bases in remarks.)		
74100	TOTAL INDIRECT COSTS	$	$
	O. TOTAL DIRECT AND INDIRECT COSTS (M + N)	$	$
74500	P. LESS RESIDUAL FUNDS (If for further support of current project; GPM 252 and 253)	$	$
75000	Q. AMOUNT OF THIS REQUEST (O MINUS P)	$	$

REMARKS

NOTE: SIGNATURES REQUIRED ONLY FOR REVISED BUDGET (GPM 233). THIS IS REVISION NO.

SIGNATURE OF PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR	DATE OF SIGNATURE	TYPED OR PRINTED NAME AND TITLE
SIGNATURE OF AUTHORIZED ORGANIZATIONAL REPRESENTATIVE	DATE OF SIGNATURE	TYPED OR PRINTED NAME AND TITLE

FOR NSF USE ONLY

INDIRECT COST RATE VERIFICATION			PROGRAM OFFICER APPROVAL
Date Checked	Date of Rate Sheet	Signature	

Grant Number	Amend No.	Institution	Organization	Fund Acct.	Program	Object	

	Proposal Number	Dur.	Chg.	Award Date	Proposed Amount	Prop'd. Dur.	

PAGE 2 OF 2 PAGES

SCIENTIFIC PERSONNEL IMPROVEMENT

Women in Science (WIS) Program

INDIVIDUAL REVIEWER FORM

Instructions for Completing Form

- Do not fold or separate sheets while completing form.
- Complete the panel and project identification blocks.

SECTION A:

Check your response to the FINDING about conformance of the proposal to the Guidelines.
Register your response to each consideration under RATING (items 1 through 9.)

SECTION B:

Please provide written comments reflecting the technical and other considerations that led to your rating or to the budget changes you recommend (items 10 through 12.)

SECTION C:

AFTER COMPLETING ALL OF THE ABOVE STEPS, ASSIGN A SINGLE NUMBER SCORE USING THE CRITERIA LISTED BELOW:

7 —Clearly a most outstanding proposal; one which definitely should be funded.

6 —Very good proposal; one which should be funded if at all possible.

5 —Good proposal; one which is thoroughly meritorious and well above average, and which you reluctantly would see declined in a very intense competition.

4 —Average proposal; one which has merit and is worthy of support, but which demonstrates no particularly remarkable characteristics which might warrant a higher priority.

3 —Fair proposal; one which has some merit, but about which you have substantial reservations. A borderline proposal even if ample funds are available to support all "meritorious" proposals.

2 —Poor proposal; one for which you wish to provide an active negative recommendation.

1 —Clearly one of the poorest proposals.

VERBATIM BUT ANONYMOUS COPIES OF REVIEWS, RATINGS AND ASSOCIATED CORRESPONDENCE WILL BE SENT ONLY TO THE PROJECT DIRECTOR ON REQUEST. SUBJECT TO THIS NSF POLICY AND APPLICABLE LAWS, INCLUDING THE FREEDOM OF INFORMATION ACT, 5 USC 552, REVIEWERS' COMMENTS WILL BE GIVEN MAXIMUM PROTECTION FROM DISCLOSURE.

WOMEN IN SCIENCE PROGRAM - WISP

National Science
Foundation

INDIVIDUAL REVIEWER FORM (SAMPLE)

Section A. FINDING AND RATING

WISP provides support for Science Career Workshops, the purpose of which is to provide factual information and practical advice regarding careers in science to women undergraduate students or to women who have at least a bachelor's degree in science and need guidance regarding further education or how to obtain scientific jobs that will make full use of their potential. The Finding is related to the eligibility and the Rating is related to quality. Please rate the two independently.

FINDING

	Yes	No	Maybe	Comment
This proposal conforms to the WISP Guide for Proposal Preparation and represents a reasonable response to it				

RATING

	High			Low	Comment
PROJECT DESIGN: The degree to which					
1. all fields supported by NSF will be covered in the Workshop					
2. the information and advice to be provided will be appropriate, complete, and presented in an interesting manner					
3. the plans for recruitment and selection of participants will result in the number desired and an appropriate mix of participants					
4. the plan for evaluation is feasible and will provide a good measure of project outcomes					
5. the continuing activity proposed will be effective in informing women about careers in science and will be supported by the grantee institution					
MANAGEMENT: The degree to which					
6. staff responsibilities are clear, supervision is adequate, and scheduling is reasonable					
PERSONNEL: The degree to which					
7. the institution's personnel have the expertise and time to carry out the project successfully					
8. the outside experts proposed will contribute positively to the project					
INSTITUTIONAL CAPABILITY: The degree to which					
9. the institution has available resources and relevant experience for carrying out the project					

SECTION B. COMMENTS AND JUSTIFICATION

10. General comments and explanation of ratings or comments given above, especially negative ones.

11. Recommended budget modifications and reasons therefor

12. Suggestions for improvement of the proposed project

SECTION C. PROPOSAL RECOMMENDATION SCORE

INITIAL 7 HIGH–1 LOW	FINAL 7 HIGH–1 LOW

PROJECT INSTITUTION	PROJECT DIRECTOR	PROPOSAL NO.

REVIEWER NAME AND NUMBER	PANEL NUMBER

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

FINAL PROJECT REPORT
NSF FORM 98A

PLEASE READ INSTRUCTIONS ON REVERSE BEFORE COMPLETING

PART I—PROJECT IDENTIFICATION INFORMATION

1. Institution and Address

2. NSF Program

3. NSF Award Number

4. Award Period
From To

5. Cumulative Award Amount

6. Project Title

PART II—SUMMARY OF COMPLETED PROJECT *(FOR PUBLIC USE)*

PART III—TECHNICAL INFORMATION *(FOR PROGRAM MANAGEMENT USES)*

1. ITEM *(Check appropriate blocks)*	NONE	ATTACHED	PREVIOUSLY FURNISHED	TO BE FURNISHED SEPARATELY TO PROGRAM	
				Check (√)	Approx. Date
a. Abstracts of Theses					
b. Publication Citations					
c. Data on Scientific Collaborators					
d. Information on Inventions					
e. Technical Description of Project and Results					
f. Other *(specify)*					

2. Principal Investigator/Project Director Name *(Typed)*	3. Principal Investigator/Project Director Signature	4. Date

NSF Form 98A (5-78) Supersedes All Previous Editions

Form Approved OMB No. 99R0013

INSTRUCTIONS FOR FINAL PROJECT REPORT
(NSF FORM 98A)

This report is due within 90 days after the expiration of the award. It should be submitted in two copies to:

National Science Foundation
Division of Grants and Contracts
Post-Award Projects Branch
1800 G Street, N.W.
Washington, D.C. 20550

INSTRUCTIONS FOR PART I

These identifying data items should be the same as on the award documents.

INSTRUCTIONS FOR PART II

The summary (about 200 words) must be self-contained and intelligible to a scientifically literate reader. Without restating the project title, it should begin with a topic sentence stating the project's major thesis. The summary should include, if pertinent to the project being described, the following items:

- The primary objectives and scope of the project.
- The techniques or approaches used only to the degree necessary for comprehension.
- The findings and implications stated as concisely and informatively as possible.

This summary will be published in an annual NSF report. Authors should also be aware that the summary may be used to answer inquiries by nonscientists as to the nature and significance of the research. Scientific jargon and abbreviations should be avoided.

INSTRUCTIONS FOR PART III

Items in Part III may, but need not, be submitted with this Final Project Report. Place a check mark in the appropriate block next to each item to indicate the status of your submission.

a. Self-explanatory.
b. For publications (published and planned) include title, journal or other reference, date, and authors. Provide two copies of any reprints as they become available.
c. Scientific Collaborators: provide a list of co-investigators, research assistants and others associated with the project. Include title or status, e.g. associate professor, graduate student, etc.
d. Briefly describe any inventions which resulted from the project and the status of pending patent applications, if any.
e. Provide a technical summary of the activities and results. The information supplied in proposals for further support, updated as necessary, may be used to fulfill this requirement.
f. Include any additional material, either specifically required in the award instrument (e.g. special technical reports or products such as films, books, studies) or which you consider would be useful to the Foundation.

IF THIS CARD IS COMPLETED IT MUST BE PUT IN AN ENVELOPE AND ADDRESSED TO:

MPE/BBS SE Branch
Division of Grants and Contracts
National Science Foundation
Washington, D.C. 20550

APPLICANT MANAGMENT AND ORGANIZATION CARD

TO BE FILLED OUT BY THE NATIONAL SCIENCE FOUNDATION

Date Received____________________ Proposal Number____________________

TO BE FILLED OUT BY THE PROPOSER

Name of Institution____

Name of Project Director____

Name of Director of
Sponsored Programs (or equivalent)________________________________

Telephone Number____

NOTE: If your institution has not received an NSF grant within the past 2 years, please fill out this card and attach it to the original signed copy of the proposal when submitted to NSF.

90%